

SECOND
ANNUAL REPORT
OF THE
BOARD OF HEALTH
OF THE
CITY OF NEWARK, N. J.,
FOR THE YEAR ENDING
DECEMBER 31, 1886.

NEWARK, N. J.:
L. J. HARDHAM, Printer, 243 & 245 Market Street.

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BOARD OF HEALTH

OF THE
CITY OF NEWARK, N. J.

MEMEBERS,

HIS HONOR, MAYOR JOSEPH E. HAYNES, PRESIDENT.
DR. FREDERICK B. MANDEVILLE, HEALTH PHYSICIAN.
ALDERMAN HENRY R. BAKER, DR. CHARLES M. ZEH,
ALDERMAN ALEXANDER H. JOHNSON, DR. HERMAN C. H. HEROLD.
ALDERMAN TYLER PARMLY, HON. WILLIAM A. RIGHTER.
MR. SAMUEL S. SARGEANT.

COMMITTEES OF THE BOARD FOR 1886.

On Finance.—Alderman, Johnson, Alderman Parmly, Dr. Herold.
On Sanitation.—Dr. Mandeville, Dr. Zeh, Mr. Sargeant.
On Laws and Ordinances.—Dr. Zeh, Dr. Mandeville, Alderman Baker.
On Conference and Appointments.—Mr. Sargeant, Alderman Baker, Alderman Parmly.

OFFICERS OF THE BOARD.

DR. DAVID L. WALLACE, *Secretary and Health Officer.*
DAVID D. CHANDLER, *Clerk to Health Officer.*
C. PHILLIPS BASSETT, C. E., E. M., *Consulting Engineer.*

SANITARY INSPECTORS.

First and Eight Wards.—Charles H. Edwards.

Second and Fourth Wards—Lewis H. Bridgem.

Third, Ninth and Fourteenth Wards.—William H. Lyle.

Fifth and Tenth Wards.—George W. Schmitt.

Sixth and Seventh Wards.—Bernard Nulty.

Eleventh and Fifteenth Wards.—Thomas E. Freeman.

Twelfth Ward.—Victor L. Hesse.

Thirteenth Ward.—David Duff.

MEAT INSPECTORS.

WERNER RUNGE, D. V. S.

PHILLIP MILLER.

MILK INSPECTOR.

HENRY NEGLES.

OUT-DOOR POOR DEPARTMENT.

CITY DISPENSARY, CENTRE MARKET BUILDING, ROOM 12.

CITY APOTHECARY.

J. FRANK CRAMER.

DISTRICT PHYSICIANS AND ATTENDING PHYSICIANS TO DISPENSARY.

First District, 1st and 8th Wards.—Dr. E. DeL. Bradin.

Second District, 2d, 3d and 4th Wards.—Dr. Arthur C. Dougherty.

Third District, 9th and 10th Wards.—Dr. F. L. Meyers.

Fourth District, 5th and 12th Wards.—Dr. H. T. Herold.

Fifth District, 13th and 14th Wards.—Dr. Henry A. Kornemann.

Sixth District, 7th and 15th Wards, (east of Newark St.).—Dr. Stephen W. Van Dyne.

Seventh District, 6th Ward. Dr. Vincent Nager.

Eighth District, 11th Ward and 7th and 15th Wards, (west of Newark St.).—Dr. Edward Everett.

OFFICE OF THE BOARD,

CENTRE MARKET BUILDING, ROOMS 8 AND 9.

Regular meetings of the Board are held in the Mayor's office, City Hall, on the first Monday of each month, at 8 o'clock P. M.

REPORT.

ANNUAL REPORT
OF THE
BOARD OF HEALTH.

NEWARK, N. J., Jan. 1, 1887.

*To the Honorable the Board of Health of the City of
Newark :*

GENTLEMEN I have the honor herewith to transmit this, the second annual report of the Board of Health of this city, for the year ending December 31, 1886

VITAL STATISTICS.

As you are well aware, by virtue of an Act of the Legislature of this State, the records of vital facts and statistics are kept in the office of the City Clerk, he being the recorder. Through the courtesy of Mr. Samuel H. Pemberton, our City Clerk, I have had access to these records, and from daily reports taken from his books, I have been able to keep a complete record in the office of the Board, and from this record to make such classifications as to me would appear to be of public interest. These will appear elsewhere in my report.

While the mortality statistics are complete, the records of births and marriages are unsatisfactory, from the fact that many of our physicians and clergymen are very neglectful of their duty regarding these returns.

The value of the complete returns of births and marriages is not as yet fully understood by the public at large, and at present any enforcement of rigid measures for neglect respecting these would probably be considered exceedingly arbitrary, and, in fact, the question might be raised, as it has been respecting the reporting of contagious and infectious diseases, that to compel a person to perform a certain duty some return should be made for the same.

The law of this State respecting these returns is, that they shall be received by the City Clerk, or other officer charged with this duty, who shall transmit them at stated intervals to the Secretary of State; and in the case of a county having a County Board of Health, or of any city having a population of 30,000 or over, an indexed registry shall be kept in the local office. When received by the Secretary of State they shall be arranged and alphabetically indexed and kept on file with the archives of the office, each year by itself.

It will thus be seen that the records themselves remain filed, but the certified transcript of them is, by law, accepted as *prima facie* evidence of the event certified. Of course, if the event is not on record, the transcript cannot issue.

With regard to many settlements of property, the law demands proof of the events of birth and marriage, and yet, from a lack of rigid enforcement of the law

relating to these returns, it virtually leaves it optional whether the proof thereof shall be publicly recorded at or near the time the event occurred.

There are, no doubt, many persons living to day in comparative poverty who would be in the enjoyment of his just inheritance if he could establish the fact of his descent or legitimacy, and if, as stated above, transcripts of these records are accepted in a court of law, it will readily show how important it is that such records should be complete. I trust that having called the attention of the Board to these facts, that at an early day an ordinance will be passed regulating the prompt return of births and marriages, paying a small fee for the same, if necessary, in order to overcome the assertion mentioned before relating to the inability to compel a person to perform a duty for which no return is made.

During the past year 4,574 births have been reported, or an annual rate of 28.59 per thousand of the population.

During the same time 1,375 marriages were reported or an annual rate of 8.59 per thousand of the population.

The total number of deaths for the year is 3,602. This gives a death rate per thousand of the population (estimated at 160,319) of 22.51

The decrease from the preceeding year is 58, but when we take into consideration the increase in the population this is greater than it seems.

Of the total number of deaths 913 were of children under one year of age, and 1,447 of those under five years.

By a comparison the decrease in deaths under five years from 1885, is 27.

By a comparison of the different classes, it is found that the decrease in deaths from the zymotic diseases is 114, which is certainly a very favorable showing.

In the constitutional class the decrease is 7

In the local class the decrease is 7.

In the developmental diseases and in those from accident and violence, the increase is 58 and 12 respectively.

One subject that demands attention is the large number of deaths from phthisis. While the decrease from last year numbers 37, the deaths for the year number 473. This is a matter that demands attention and action on the part of our legislators, looking to the passage of laws regulating certain trades, and action on our part looking to the improvement in the condition of our tenement houses both as regards ventilation and overcrowding.

SANITARY CONDITION OF THE CITY.

If, considering this subject, it might be well to make a few suggestions looking to the improvement of the general sanitary condition. The first, and one of the most important, is that some measures should be adopted whereby the large number of privy vaults and cesspools that exist all over the city, and which are, in many instances, a fertile source of disease, should be

abolished or rendered less dangerous. The privy vaults, especially, number one for most every building, and in countless instances have connection with our sewers without an intervening trap. The pipes in these cases are placed about three feet from the bottom of the vault, the object being to use them as overflows and prevent the vault from filling. The vault itself, in such a case, is rendered dangerous in three ways. First, from the exhalation given off from the foul contents; second, from the contents leeching into the surrounding soil, and third, from its acting as a wholesale ventilator of the sewer itself. The cesspools are not so numerous, although there are a great many more than there should be. As just stated concerning privy vaults, and which also applies to the cesspools, the contents are constantly escaping into the surrounding soil, poisoning that and contaminating the wells, which, in many instances, are situated dangerously close to them. An ordinance should be passed requiring that all leeching privy vaults and cesspools should be abolished on premises abutting on streets in which sewers are laid. The drainage system of the house, if such a system exists, should be connected with the sewer, and if it is not practicable to construct water closets in the houses themselves, then suitably constructed water-tight vaults, latrines or school sinks, with appliances for flushing the same should be constructed and connected with the sewer. In case there is no drainage system in the house itself, a properly constructed catch basin should be placed in the yard and a pipe suitably trapped should run from this to the sewer. Unfortunately, in many sections of the city we

are without sewers, and the question arises: what is to be done with the vaults and cesspools in these localities? The answer is, that they should be built absolutely water-tight and be cleaned and disinfected at least once in each year. This may appear to many of our citizens as an innovation, but so long as these receptacles are left so that their contents can escape and poison the surrounding soil, just so long will we have to deal with many of the preventible diseases which now exist in our midst. This suggestion is not a new one by any means, as the majority of our principal cities have adopted it and with excellent results.

SUNKEN LOTS.

Another subject to be dealt with and which has been called to our attention at different intervals, is the existence in many localities of sunken lots, which, in many instances, are filled with stagnant water and which furnish a ready means whereby all manner of refuse from our various manufactories can be disposed of. These are not only a source of very great annoyance to the surrounding inhabitants from the noxious odors given off from material deposited on them, but when filled with stagnant water they are certainly detrimental to health. An ordinance should be passed at an early date by which the Board could compel the owners of these lots to fill the same and thus remove another source of unhealthfulness. In addition to this a communication should be sent to the Common Council requesting that body to furnish a suitable dumping ground where the refuse and waste from our

numerous manufactories could be received and properly taken care of; and after such means were provided, we could prosecute such parties as persisted in dumping refuse in other places without appearing arbitrary.

DISPOSITION OF NIGHT SOIL.

Another matter that demands our attention is the disposition of night soil. While it is our desire to have this material carted to the farms on the outskirts of the city, some distance from the thickly populated districts, we must not forget that in the march of improvements a number of houses are being erected in the outer portions of our city in close juxtaposition to these farms; and the time is close at hand when these places of dumping will have to be proscribed by the Board. Then again, certain of our scavengers cart their material into the surrounding townships and deliver it to farmers there, and we thus make ourselves more or less of a nuisance to the inhabitants of these townships. This subject should receive early attention and some means be adopted whereby this business could be controlled.

TENEMENT HOUSES.

The attention of the Board is called to the necessity of the passing of an ordinance to secure the better sanitary condition of tenement house, as regards both ventilation and overcrowding. To the unsanitary condition of many of these houses is due a large proportion of the deaths from preventible diseases in cities,

and ours is no exception. With an ordinance regulating this subject, properly enforced, many deaths could be prevented, but more than this, the poorer classes of our population, who, from circumstances are compelled to live in these houses, are certainly entitled to recognition on our part in matters affecting their general health, consequently this action should look not only to rules governing the construction of new buildings, but to the improvement of those already constructed.

WATER SUPPLY.

In my report of last year, in speaking of the present water supply taken from the Passaic River above Belleville, I mentioned the fact that this stream was more or less contaminated, in that it received not only the sewage of the City of Paterson, sixteen miles above the intake, and a portion of the sewage from our own city, but also from certain manufactories between this city and Paterson. I also stated that the City of Newark and points below the intake were responsible for two-thirds of the pollution, while the other third could be charged to the City of Paterson and points above the intake. This being the condition of our present supply, it demands our most serious consideration. Much has been said on this subject before many of our improvement associations and in other public meetings, and there is a conflict of opinions as to what should be done. Many of our property owners contend that the present supply should be abandoned altogether and a new supply brought from the headwaters of the Passaic. This

would, undoubtedly, give us a water free from organic impurities, but before being used it would probably have to be filtered to remove the suspended matters.

Another thing to be considered in this connection is the large cost that would be imposed upon us ; still, if our present supply cannot be improved this is the only step left for us, notwithstanding the cost. I am inclined to think the same as many others, that means can be adopted whereby the present supply can be made as pure as water obtained from other sources. During the year 1886 a Board of Pollution was organized, consisting of certain members of the Newark Aqueduct Board and the Board of Public works of Jersey City, which obtains its water supply from the same source as Newark ; and this Board organized a water patrol to guard against the pollution of the Passaic by manufacturers and others. This patrol, which has a launch to navigate the river, has certainly done good work and should undoubtedly be continued. But this is only a start in the right direction. Manufacturers and communities along the line of the river should be compelled to subject their sewage to such a degree of purification as will return the effluent water to the river with at least fifty per cent. of its organic impurities removed. And this, with constant vigilance on the part of the river patrol, purification by flow and proper filtration with aeration, should give us a water of excellent quality. Inasmuch as our own city is responsible for a large proportion of the contamination, it should take the initiative and adopt means whereby the sewage that is now emptied into the Passaic would be diverted into other channels.

In the remarks on sewerage and drainage in the report of 1885, a history of the present intercepting sewer in the southerly section of the city was given, together with a description of the pumping station now being erected to pump the sewage into the Newark bay, some miles below the built-up portion of the city. It was also stated that it was the intention of the authorities to build two more intercepting sewers—one to extend from the present intercepting branch, 3,150 feet from the pumping station, to the junction of Market and Jackson streets, and thence following the course of the river to the Gully road, the other to extend from the present intercepting branch, 1,200 feet from the pumping station, in an easterly direction to and through Ferry street to the eastern boundary of the city. These two intercepting branches would receive all the sewage now emptying into the Passaic, and carry it to the pumping station, from which it would be pumped into the bay, and nothing but storm water would pass into the river in case of heavy storms. With the construction of these branches, Newark's responsibility in the contamination of the Passaic would cease, and we could with better grace, after finding other sources of pollution, compel those responsible for it to cease from such practice and adopt other means for its disposal.

In the latter part of the year 1885 the Board of Health were invited to witness the process of water filtration as carried on by the Newark Filtering Company, who have erected a number of plants in different parts of the country, both for manufacturers and communities. This Company also requested that

samples should be collected before and after filtration, for analysis. The invitation was accepted, and samples were collected and sent to Professors Austin and Wilber, of Rutgers College, who are the chemists to our Board. The process as carried out by this Company is as follows :

First. The water is oxygenated by the injection of air, which oxydizes a certain amount of organic matter and affords an abundance of oxygen and carbonic acid for the next step.

Second. The aerated water then passes through a bed of iron filings or trimmings, freed from any adhering oil or impurities by a bath of diluted alkali ; the surface of the iron becomes oxidized, forming ferrous and ferric oxides. A certain amount of this oxide of iron is dissolved by the carbonic acid in the water, forming bicarbonate of iron. If the water contains minute amounts of organic acids, which it usually does, these will also unite with the iron, forming organic salts of it. The soluble salts of the peroxide of iron have a marked coagulative effect on gelatinous and albuminous matters, and will, without doubt, either precipitate, coagulate or render insoluble, any gelatinous or albuminous matters present.

Third. Lime water is now added, which unites with the free carbonic acid dissolved in the water, and also with the carbonic acid present in the form of bicarbonates of lime, magnesia and iron. As a result of this withdrawal of bicarbonate carbonic acid, the lime, magnesia and iron held in solution as bicarbonates, are precipitated as carbonates of lime, magnesia and hydrated peroxide of iron. This precipitate

envelopes the suspended particles of clayey and mineral matters and the coagulated gelatinous and albuminous substances and renders them capable of removal by filtration.

Fourth. The water which is now turbid with precipitated matter is passed through a filter bed of sand and coke. It comes out perfectly clear, free from all extraneous matter, brilliant, sparkling, and filled with myriads of minute air bubbles.

The compared results of analysis are as follows :

PASSAIC WATER

| | Before Treatment. | After Treatment. |
|--------------------------------|--|-----------------------------------|
| Total Solids..... | 8.02 | 7.53 |
| Sulphuric Acid | 0.70 | 0.56 |
| Chlorine | 1.75 | 1.56 |
| Permanent Hardness..... | 2.56 | 1.98 |
| Temporary Hardness | 0.06 | 0.52 |
| Nitrates (parts per million).. | 0.18 | 0.28 |
| Nitrites | Trace | Trace |
| Free Ammonia | 0.06 | 0.02 |
| Albumenoid Ammonia..... | 0.185 | 0.115 |
| Oxygen required to oxidize.. | 3.50 | 1.80 |
| Color..... | Slightly Yellow, very little suspended matter. | Clear, full of air bubbles. |

It is noticed that the temporary hardness is increased, but this is due to a slight excess of lime being used in the lining. As this is capable of exact regulation there is no reason why this process should render the water perceptibly harder. In the aerated and filtered water there was a considerable increase in

the amount of nitrates. This is caused by the oxidation of the nitrogenoid matter, and shows how beneficial and effective the aeration of the water is. In all respects it is shown that the process gives us a water perfectly clear, palatable, free from suspended matters, and with a large proportion of the organic impurities removed.

Instead of using the iron filings, as stated in the Second step Experiments, have demonstrated that a minute amount of sulphate of alumina (or alum) can be used as a coagulant, and, with the process properly carried out, the aluminum salt is all removed in the filtering and a remarkably pure water is obtained, and I understand that this salt is now substituted in this process at the present time.

There is one good feature in which this process of filtration and purification differs from most of the processes heretofore used; it offers no impediment whatever to the flow or supply, the quantity being determined simply by the power and size of the filters and supply of water. This same company has now perfected plans whereby, it is claimed, that germs of disease, should they exist in water, can be rendered innocuous, the process consisting of bringing the water to a temperature sufficient to destroy all life in these germs. This, of course, is no new idea, but the process by which it is done can be carried out at an exceedingly small cost. This is introduced in connection with the different steps above described, and is carried out after the liming and just before filtration. If it should be decided to carry out such a plan of purification, it would be far better to erect a plant at

each distributing reservoir than at the pumping station, as by this means the water can be distributed immediately after leaving the filter and will not run any risk of being impregnated with germ life or becoming otherwise polluted after treatment.

ICE SUPPLY.

The subject of the supply of ice for domestic purposes is one that demands more than passing attention. There are a number of instances on record of certain diseases being traced to the use of impure ice. Ice, of course, is purer than the water from which it is made, but if cut from a foul pond will itself be foul, as the vitality of some microscopic organisms is not destroyed in the process of freezing, as is shown by the fact that samples from the centre of a block of ice will inoculate sterilized infusions with the germs of putrefaction as readily as the water from which it is made. This subject has already received attention from the State Board of Health, and a law has been passed by the Legislature regulating the cutting and sale of ice in cities of this State, and giving to boards of health in such cities power to regulate and control the same. I think it would be well for our Board to take advantage of this law and regulate the sale of this commodity in the City of Newark.

SLAUGHTER HOUSES.

As stated in the report of 1885, there are eight slaughter houses in this city, and from the condition of the buildings themselves and their surroundings, it is only too evident that a stringent ordinance regulating the construction of slaughter houses and the

slaughtering of animals should be passed at once. It has been maintained by the owners of the slaughter houses on the margin of the meadow land in the southerly section of the city, that it would be impossible for them to conform to any ordinance requiring them to connect their buildings with a public sewer, inasmuch as they would not be allowed to connect with the intercepting sewer which is the only one passing near them. To this I would answer that in the construction of this sewer these buildings and the refuse poured from them on the meadow land was taken into consideration and a branch was placed in said sewer so that in case they were required to connect they could do so. It is not right, after all the money that has been spent to redeem this section of the city from the sewage nuisance, to allow the refuse from these buildings to be poured on the meadows, and I would urge an early consideration of this subject in order that the authority can be vested in your health officer to either have these buildings and their surroundings placed in a proper condition or closed entirely before the advent of warm weather, when the noxious odors arising from decomposing animal matters will permeate the air and be carried for long distances to not only the discomfort of the inhabitants of this section of the city, but also to the detriment of their health.

HOUSE TO HOUSE INSPECTION

It is a fact recognized by all health authorities that the only accurate way to ferret out nuisances, cases of

defective plumbing and drainage, polluted wells and other sources of disease, as well as to ascertain the names and address of unvaccinated persons, is by a systematic house to house inspection made by intelligent inspectors. This plan has been carried out by your health officer for the past year and a half, and as regards intelligence, as well as faithfulness, the inspectors detailed to perform this work have both of these qualifications.

The following is a copy of the blank required to be filled out for each piece of property examined :

| | | | | | | | |
|-----------------------------|-------------------------|------------|----|-----|-----|-----|--|
| Date, | 18 | | | | | | |
| Location, St., | No. | Ward | | | | | |
| Owner, | Address, | | | | | | |
| Agent, | Address, | | | | | | |
| Lessee, | Address, | | | | | | |
| Size of Lot, | Size of Building, | | | | | | |
| Number of Stories, | | | | | | | |
| How occupied, | | | | | | | |
| Stories | 1st | 2d | 3d | 4th | 5th | 6th | |
| Families provided for | | | | | | | |
| Families occupying | | | | | | | |
| Number of Adults | | | | | | | |
| Number of Children | | | | | | | |
| Height of Ceiling | | | | | | | |
| Inside Rooms, Number. | | | | | | | |
| How many Sinks. | | | | | | | |

State of Repair,.....
 General Sanitary condition,.....
 Is there a sewer through street,.....
 Is there sewer connection,.....
 Have they a cesspool on premises: How many,.....
 Where situated. (How far from house),.....
 Its condition. (Blind or open),.....
 Is soil or waste pipe ventilated above roof,.....
 Are waste pipes from bowls and sinks properly trapped,.....
 If not, where needed,.....
 How many water closets in house,.....
 Where situated,.....
 What variety,.....
 Are they properly ventilated,.....
 What is condition of ventilating pipes on building.....
 Do family or families use City water for drinking purposes,....
 Is there a well on premises,.....
ft. f'm cesspoolft f'm privy vault. Condition.....
 Have they a privy vault on premises,
 feet from house,.....feet from adjoining houses.
 How far from street,.....
 Size,..... Condition
 Have they a cistern on premises,.....
feet from cesspool, feet from privy vault
 Its condition
 Size of yard..... Condition,.....
 Is there a rear building, How near,
 Describe rear building, if a tenement, otherwise under Remarks.
 Adults vaccinated,..... Not vaccinated,
 Children vaccinated, Not vaccinated,
 Sickness now,.....
 Sickness during past twelve months,.....
 Deaths during past twelve months,.....

REMARKS.

PLAN.

Signature of Inspector.

Eighty of these are bound together in book form of a size convenient to be carried in the pocket. When a book is filled it is labeled and filed away in a safe, each ward being placed by itself. Every morning the work of the day before is gone over carefully, and when it is necessary to serve a notice, it is made out at once and a record taken. When the notice sent has been complied with and existing evils remedied, the corrections are made at once. It is now only a matter of a very short time before a complete sanitary survey of the whole city will be made, the results of which will be on file in the office of the Board, the value of which will be inestimable. The result of this work to date is as follows :

| | |
|---|--------|
| Houses inspected..... | 11,757 |
| Nuisances found..... | 1,844 |
| Nuisances abated | 1,773 |
| Cases of defective plumbing & drainage found | 1,037 |
| Cases of defective plumbing and drainage rec- tified | 958 |
| Persons not vaccinated (name and residence taken | 5,372 |
| Private wells in existence. | 1,129 |

OUT-DOOR POOR.

The City of Newark is divided into eight poor districts, with a physician for each district. In addition to this we have a City Dispensary in the Market building, adjoining the Board of Health office. The district physicians are not required to treat patients in their offices, it being considered that if a patient is able to call at the doctor's office he can walk to the dispensary where clinics are held each day Sunday excepted, between the hours of 9 and 11 a. m., the district physicians alternating in their attendance upon these clinics. In all cases where the sick poor are confined to the house the district physicians are required to give them the attention any other patient would receive. All prescriptions, whether written at a patient's home or at the clinics, are filled at the dispensary. Mr. J. Frank Cramer, in addition to his services as City Apothecary, extracts teeth for such as are unable to pay for the services of a dentist, and also vaccinates such indigent persons as require such operation.

The following is the yearly statement of the City Apothecary :

| | |
|--|-------|
| Number of patients treated at clinics..... | 4,159 |
| Number of dispensary prescriptions filled | 4,740 |
| Number of district prescriptions filled..... | 4,838 |
| Teeth extracted..... | 2,456 |
| Vaccinations | 478 |

The total amount spent for drugs was \$901 02, making an average cost per prescription of nine and two fifths cents.

The following table shows by districts the number of

patients treated, visits made, prescriptions written, number of patients sent to hospitals, and deaths for the year 1886 :

| District. | Location. | Patients | Visits Made. | Prescriptions Written. | Sent to Hospitals | Deaths |
|-------------|--|----------|--------------|------------------------|-------------------|--------|
| First... | 1st and 8th Wards... | 213 | 784 | 615 | 34 | 20 |
| Second. | 2d, 3d and 4th Wards | 388 | 650 | 831 | 87 | 16 |
| Third. | 9th and 10th Wards | 401 | 1,093 | 771 | 35 | 22 |
| Fourth. | 5th and 12th Wards. | 368 | 686 | 464 | 38 | 11 |
| Fifth. | 13th and 14th Wards. | 483 | 1,077 | 294 | 60 | 22 |
| Sixth... | 7th and 15th Wards, east of Newark st.. | 653 | 1,626 | 811 | 1. | 19 |
| Seventh | 6th Ward..... | 347 | 697 | 519 | 28 | 14 |
| Eighth. | 11th, 7th & 15th Wds, west of Newark st | 488 | 624 | 533 | 49 | 17 |
| Grand Total | | 3,341 | 7,237 | 4,838 | 350 | 141 |

MILK INSPECTION.

This article of food in which fraud is practiced more than in any other, and which forms the chief article of diet of our infant population during those years when they are the least unable to withstand any tampering with their nourishment, is one that boards of health should have under strict surveillance. This is an article of which adulteration is most easy of execution and which can be carried to a very great degree without much danger of detection by the ordinary consumer. In this State, as in most others of this country, a standard has been established in regard to milk. In New Jersey the requirements are that it shall contain twelve per cent of milk solids. This is, perhaps, all very well so far as it goes, but it does not go far

enough. In addition to this, the law should require that of this twelve per cent. three per cent. should be fat. This not being required, all of the dealers in this article whose intention it is to practice fraud, have made themselves familiar with the workings of the lactometer, and while the milk as it comes from the cow will register high (from 110 to 115), and show by analysis from thirteen to fourteen per cent of milk solids, water is added until the lactometer registers down to 100, in which case an analysis will show the required twelve per cent. of solids, but in the majority of cases less the three per cent of fat. Another method practiced is to supply what is called "half milk," prepared as follows: The evening milk is allowed to stand over night when the cream is removed; the morning milk is then added to the skimmed article without being tampered with. The result is that an article is obtained which, under most circumstances, will analyze up to the required twelve per cent. of solids, less the three per cent. of fat, while the dealer has a quantity of cream for which he receives a high price. If the three per cent. of fat should be absolutely required, the dealers being unable to ascertain this point, and being in fear of prosecution would cease to practice these deceptions. Another point to be mentioned is the condition of the stables in which cows are housed. In a large majority of cases these stables are totally inadequate for the use to which they are put. They are overcrowded; no allowance, whatever, being made for the cubic feet of space per animal; the floors admit of soakage and the ground beneath is saturated to a considerable depth with liquid filth. With wells

situated in close proximity to such buildings, the water from which is given to the animals to drink, this, in connection with the other things mentioned, cannot but have a bad effect upon the animals themselves and upon the milk they give. Too much attention cannot be given to these matters. The State law regulating the sale of milk should be amended so that all milk should contain twelve per cent. of milk solids, three per cent. of which should be fat. In addition to this our Board should pass an ordinance regulating the stabling and keeping of cows. In fact, the keeping of more than one cow to a city lot in the built-up portion of the city should be absolutely prohibited, as the bad results are two fold; first, to the animals themselves from overcrowding and second, to the health of the surrounding inhabitants. With the enacting of the above laws and their thorough enforcement, there is no reason why our milk supply should not be of the very best. During the past year close attention has been given to milk inspection by Henry Negles, the inspector of the Board, and a number of suits have been instituted for violation of the milk act, but many more cases could have been instituted had the requirements mentioned above, in reference to the quantity of fat, been a portion of the said act.

MEAT AND LIVE STOCK DEPARTMENT.

The work of this department is now being carried on in a very thorough manner by Inspectors Runge and Miller. The Board has passed two very important ordinances which have materially assisted the inspectors in their work, and which I append:

An Ordinance regulating the slaughtering of animals.

Be it ordained by the Board of Health of the City of Newark, as follows :

SECTION 1. No animal shall be killed while in an overheated, feverish, or diseased condition; nor shall any calf, pig, or lamb be killed which (being a calf) is less than four weeks old, or (being a pig) is less than five weeks old, or (being a lamb) is less than eight weeks old, and it shall be the duty of the proper officers of this board when said animals are found in an overheated, feverish, or diseased condition, or when any calf, pig, or lamb is found whose age is less than hereinbefore mentioned, to immediately affix to any pen or stall in which said animals are confined a label on which shall be written or printed the words " Quarantined by order of the Board of Health, Newark, N. J.," and he shall report the same at the office of the board that the proper order may be made relative thereto, or for the removal thereof from said city.

SEC. 2. No person or persons shall destroy, deface, conceal, interfere with, or remove any label affixed by any officer of this board as aforesaid, and no animal quarantined as above shall be removed except on permit of this board.

SEC. 3. Any person or corporation violating the provisions of this ordinance, shall, on conviction thereof, pay a penalty of fifty dollars for the first offence, and for the second and every subsequent offence the sum of one hundred dollars.

An Ordinance regulating the sale of meat, fish, birds, fowl, fruit and vegetables.

Be it ordained by the Board of Health of the City of Newark, as follows :

SECTION 1. Every person being the owner, lessee, or occupant of any room, stall, or place where any meat, fish, birds or fowl, fruit or vegetables designed or held for human food, shall

be stored or kept, or shall be held or offered for sale, shall put and keep such room, stall, or place, and its appurtenances in a cleanly and wholesome condition, and every person having charge, or interested, or engaged, whether as principal or agent, in the care or in respect to the custody or sale of any meat, fish, birds, fowl, fruit or vegetables, designed for human food, shall put and preserve the same in a cleanly and wholesome condition, and shall not allow the same, or any part thereof, to be poisoned, infected, or rendered unsafe or unwholesome for human food.

SEC. 2. No cased, blown, plated, raised, stuffed, pickled, impure, or unhealthy or unwholesome meat or fish, birds or fowls, shall be held, bought or sold, or offered for sale for human food, or held, or kept in any market, public or private, or in any public place in said city.

SEC. 3. No decayed or unwholesome fruit or vegetables shall be brought into said city, or held, bought or sold, or offered for sale for human food, or held or kept in any market, public or private, or in any public place in said city.

SEC. 4. That upon any cattle, meat, fish, birds or fowl, fruit or vegetables being found by any inspector or other officer of the Board of Health, in a condition which renders the same unsafe or unwholesome for human food, it shall be the duty of said inspector, or officer, to affix to said article or articles a label on which shall be written or printed, the words: "Condemned by direction of the Board of Health, Newark, N. J." And when anything included within the provisions of this ordinance shall be found in numbers, quantity or bulk, it shall only be necessary for said inspector or officer to affix one such label to a conspicuous part of the box, bin, basket, compartment or other place or thing containing the same, and he shall report every such condemnation at the office of the board.

SEC. 5. No person or persons shall destroy, deface, conceal,

interfere with, or remove any label affixed by any inspector or officer of this board as aforesaid.

SEC. 6. It shall be the duty of the owner or person in charge of any matter or substances that have been condemned, to immediately remove the same from any market, street or place, and convey the same to such place as may be designated by the inspector or officer, and such articles shall not be sold or offered for sale, nor in any way disposed of, and in case the owner or person in charge shall fail or neglect, or refuse to remove said articles within three hours after having been notified to do so, the same may be removed by the inspector or other officer of this board, the owner or person in charge paying all expenses therefor.

SEC. 7. Any person violating any of the provisions of the foregoing sections of this ordinance, shall, on conviction thereof, pay a penalty of fifty dollars for the first offence, and for the second and every subsequent offence the sum of one hundred dollars.

Passed Nov. 16, 1886

Before the ordinance was passed regulating the slaughtering of animals, and giving the inspector power to quarantine under the conditions mentioned, the sale and slaughtering of "bob" calves, and the slaughtering of animals in an overheated, feverish or diseased condition was carried on in open defiance of the health authorities, but at the present time, although there was somewhat of a struggle on the part of some dealers in live stock and some butchers, they have succumbed to the inevitable, and we are now practically masters of the situation. The work of this department is divided as follows :

Inspector Runge inspects daily all cattle received at

Ball's Head Market and at the various depots, and gives strict attention to the slaughter houses. Inspector Miller examines daily all meats received at the various refrigerator depots and the Centre Market, and keeps a strict surveillance on all butcher shops throughout the city. In addition to this he keeps a close watch over the fruit and vegetables sold in the city, to see that this variety of food is of good quality.

The following gives the inspections in this department together with condemnations for the year 1886.

| Months. | Beef Cattle. | Hogs. | Sheep. | Calves. | Totals. |
|--------------|-----------------|--------|--------|---------|---------|
| January.. | 2,677 | 6,264 | 6,140 | 1,640 | 16,721 |
| February.... | 1,994 | 4,209 | 4,338 | 1,749 | 12,290 |
| March..... | 3,032 | 5,088 | 7,577 | 3,597 | 19,294 |
| April..... | 3,584 | 4,329 | 7,535 | 8,109 | 23,557 |
| May..... | 3,450 | 3,554 | 6,691 | 8,268 | 21,963 |
| June..... | 2,280 | 3,403 | 7,303 | 5,635 | 18,621 |
| July..... | 1,985 | 2,184 | 7,288 | 5,232 | 16,689 |
| August..... | 2,243 | 2,039 | 10,286 | 4,479 | 19,047 |
| September.. | 2,273 | 2,925 | 13,941 | 4,150 | 23,289 |
| October..... | 2,301 | 3,122 | 7,822 | 3,376 | 16,621 |
| November.. | 2,849 | 1,677 | 7,000 | 2,260 | 16,786 |
| December... | 2,276 | 3,233 | 6,323 | 2,533 | 14,365 |
| Total. | 30,944 | 45,027 | 92,244 | 51,028 | 219,243 |

The following are the condemnations for the year.

| | Number. |
|--------------------|---------|
| Cattle, beef | 8 |
| Sheep | 117 |
| Calves | 84 |
| Hogs | 4 |

ARTICLES CONDEMNED IN MARKETS.

| | Pounds. |
|---------------|---------|
| Beef..... | 2,717 |
| Veal | 1,025 |
| Pork | 640 |
| Mutton | 242 |
| Poultry..... | 2,760 |
| Fish | 2,075 |
| Bologna | 810 |
| Sausage..... | 40 |
| | Number. |
| Rabbits..... | 126 |

Also a large quantity of fruit and vegetables.

CONTAGIOUS AND INFECTIOUS DISEASES.

During the past year, as can be seen from the tables appended to this report, there has been a great reduction in deaths from this class of diseases. The number of cases that have been in existence it is impossible to determine, as is also the number of cases that should not have occurred had it been possible to have adopted measures looking to isolation and disinfection. Previous to December 19th, there was no ordinance regulating the reporting of contagious and infectious diseases, the isolation of persons so affected, and their burial in case of death, after that date such an ordinance went into effect and the board now has this matter under control. It will thus be seen that previous to that date the reporting of these diseases was purely voluntary on the part of physicians, and consequently, in the majority of instances, the first intimation the health department had of the existence of a case was

the death certificate. In many cases of these diseases occurring as they do, on the one hand in the families of those entirely ignorant of the value of prompt isolation and disinfection; and on the other hand in those of persons who do know, but for fear of losing business will allow a case of scarlet fever or some allied disease to exist in a room adjacent to a store, where many persons are passing in and out through the course of the day, it can readily be seen that if the health department does not step in and assert its authority these diseases are bound to spread. In the passing of the above ordinance, giving us the necessary authority, we are now masters of the situation and should carry out all measures looking to the prompt suppression of diseases of this character. In the matter of isolation, it must be recognized that, in many instances, under existing circumstances, this is impossible. Such being the case, it is our duty to furnish a means whereby this can be accomplished. We have a building intended for smallpox patients that is used on an average about once in four or five years and then only for a month or so. At a very small expense this building could be put in a condition to receive such patients as cannot be isolated at home, and also such as cannot, or do not receive proper attention, and not remain empty while we have around us diseases which kill infinitely more persons than smallpox and which cause so much suffering and so many deaths. In case smallpox should break out in the meantime, a temporary structure could be erected at a very small expense to be used during its prevalence. If the above does not seem advisable to the board, I have no doubt

but that the directors of the Newark City Hospital might set aside a pavilion on their grounds for our use. Whatever the means decided upon, it is our duty to adopt a method of some kind ; we will never be able to cope successfully with this class of diseases until it is done. It has been practiced for some time in certain localities, both at home and abroad, and the results have more than justified it. I would ask that this be given early consideration and that the board adopt such measures as existing conditions demand.

SUMMARY OF WORK FOR THE YEAR.

The following gives a summary of all work accomplished during the year :

| | |
|---|-------|
| Notices served for the abatement of nuisances | 2,445 |
| Abatements | 2,239 |
| Notices served to rectify defective plumbing and drainage | 1,004 |
| Rectifications.. .. | 890 |
| Permits granted for sewer connections..... | 914 |
| Permits granted for cleaning privy vaults... | 2,658 |
| Permits granted for cleaning cesspools | 633 |
| Analysis of milk... .. | 35 |
| Analysis of water.. .. | 5 |

Very respectfully,

DAVID L. WALLACE, M. D.,

Health Officer.

TABLES.

TABLE No. 1.

SHOWING NUMBER OF BIRTHS REPORTED FOR EACH MONTH, WITH COLOR, SEX, NATIVITY OF PARENTS, TOGETHER WITH TOTAL FOR THE YEAR AND THE BIRTH RATE.

| Month. | Total | Color. | | Sex. | | Nativity of Parents. | | | | | | | | Name of child. | | | |
|--------|-------|--------|----------|-------|--------|----------------------|--------|----------|----------------------|----------------------|---------------------------------|---------------------------------|-------------|----------------|-------------|-------------|---------------|
| | | White. | Colored. | Male. | Female | Not Stated. | Native | Foreign. | Foreign Father only. | Foreign Mother only. | Nativity of Father stated only. | Nativity of Mother stated only. | Not Stated. | Stated. | Not Stated. | Legitimate. | Illegitimate. |
| Jan. | 199 | 196 | 3 | 102 | 93 | 4 | 122 | 47 | 18 | 7 | 1 | 3 | 1 | 48 | 151 | 195 | 4 |
| Feb. | 324 | 500 | 24 | 216 | 276 | 2 | 260 | 161 | 64 | 20 | 1 | 3 | 4 | 195 | 329 | 513 | 11 |
| March. | 408 | 400 | 8 | 196 | 211 | 1 | 163 | 162 | 49 | 29 | 2 | 1 | 1 | 201 | 207 | 406 | 2 |
| April | 391 | 382 | 9 | 194 | 196 | 1 | 148 | 160 | 47 | 28 | 3 | 2 | 1 | 215 | 176 | 390 | 1 |
| May | 356 | 334 | 2 | 183 | 153 | | 181 | 139 | 42 | 22 | 1 | 1 | | 210 | 126 | 356 | |
| June. | 323 | 320 | 3 | 160 | 163 | | 149 | 134 | 22 | 12 | | 2 | 1 | 184 | 139 | 323 | |
| July | 340 | 321 | 6 | 187 | 142 | 1 | 129 | 181 | 39 | 31 | | 5 | 2 | 222 | 108 | 326 | 4 |
| Aug. | 352 | 348 | 4 | 163 | 183 | 1 | 127 | 152 | 46 | 19 | | | 1 | 210 | 142 | 352 | |
| Sept. | 386 | 383 | 3 | 186 | 200 | | 168 | 146 | 43 | 28 | | | 1 | 209 | 177 | 384 | 2 |
| Oct. | 484 | 478 | 6 | 225 | 229 | | 226 | 165 | 58 | 27 | 1 | 2 | 4 | 206 | 278 | 476 | 8 |
| Nov. | 390 | 389 | 1 | 199 | 190 | 1 | 146 | 174 | 53 | 15 | | | 2 | 219 | 171 | 388 | 2 |
| Dec. | 451 | 438 | 13 | 236 | 224 | 1 | 195 | 165 | 64 | 20 | 1 | 3 | 2 | 208 | 243 | 450 | 1 |
| Total | 4,574 | 4,493 | 82 | 2,277 | 2,262 | 15 | 1,964 | 1,736 | 545 | 248 | 18 | 22 | 18 | 2,327 | 2,247 | 4,539 | 35 |

Birth rate per thousand of the population, 28.59

TABLE No. 2.

SHOWING THE NUMBER OF MARRIAGES REPORTED MONTHLY, TOGETHER WITH A TOTAL FOR THE YEAR AND THE MARRIAGE RATE

| MONTH. | Total. | White. | | Col- ored. | | Native. | Foreign. | Nati- vity not stated | | 1st Marriage. | | 2d Mar- riage | | 3d | 4th | Marriage not stated. | |
|-----------|--------|--------|---------|---------------|---------|---------|----------|-----------------------------|---------|------------------|---------|---------------------|---------|-------|---------|----------------------------|---------|
| | | Male. | Female. | Male. | Female. | | | Male. | Female. | Male. | Female. | Male. | Female. | Male. | Female. | Male. | Female. |
| January | 46 | 46 | 46 | .. | .. | 29 | 26 | 17 | 20 | .. | .. | 37 | 40 | 7 | 5 | 2 | 1 |
| February | 70 | 70 | 70 | .. | .. | 50 | 47 | 20 | 22 | .. | 1 | 57 | 54 | 10 | 11 | 1 | .. |
| March. | 103 | 98 | 99 | 5 | 4 | 51 | 56 | 52 | 46 | 1 | 69 | 71 | 16 | 13 | .. | 18 | 19 |
| April | 107 | 106 | 106 | 1 | 1 | 65 | 69 | 42 | 35 | .. | 3 | 83 | 84 | 15 | 13 | 1 | 8 |
| May. | 102 | 101 | 101 | 1 | 1 | 61 | 65 | 41 | 37 | .. | .. | 86 | 87 | 14 | 7 | 1 | 2 |
| June. | 210 | 209 | 209 | 1 | 1 | 117 | 132 | 90 | 73 | 8 | 5 | 184 | 179 | 14 | 19 | 3 | 4 |
| July | 100 | 100 | 100 | .. | .. | 51 | 57 | 49 | 43 | .. | .. | 71 | 72 | 18 | 14 | 2 | 1 |
| August | 81 | 79 | 79 | 2 | 2 | 32 | 41 | 49 | 40 | .. | .. | 60 | 63 | 12 | 7 | 1 | 1 |
| September | 93 | 93 | 93 | .. | .. | 57 | 56 | 36 | 35 | .. | 2 | 66 | 70 | 14 | 9 | 1 | .. |
| October | 159 | 153 | 153 | 6 | 6 | 94 | 97 | 64 | 61 | 1 | 1 | 123 | 125 | 20 | 17 | 2 | 1 |
| November | 138 | 136 | 136 | 2 | 2 | 77 | 85 | 61 | 52 | .. | 1 | 118 | 113 | 6 | 12 | 2 | .. |
| December | 166 | 161 | 161 | 5 | 5 | 97 | 114 | 69 | 52 | .. | .. | 121 | 126 | 21 | 15 | 1 | 1 |
| Total | 1,375 | 1,352 | 1,353 | 23 | 22 | 781 | 845 | 590 | 516 | 4 | 14 | 1,055 | 1,064 | 167 | 142 | 16 | 11 |

Marriage rate per thousand of the population, 8.59.

TABLE No. 3.

ANNUAL REPORT OF DEATHS IN THE CITY OF NEWARK, N. J., WITH AGES OF DECEDENTS, TOGETHER
WITH SEX, NATIVITY, POPULATION AND DEATH RATE, BY CLASSES.

| CAUSES OF DEATH. | AGE BY YEARS. | | | | | | | | | | SEX. | | NATIVITY | | Total, both Sexes. | Annual Death Rate, per 1,000. | Colored. |
|-----------------------------|-------------------|---------------|---------------|----------------------|----------------|-----------------|-----------------|-----------------|-----------------|--------------------|------|--------|----------------|---------|--------------------|----------------------------------|----------|
| | 1 Year and under. | 1 to 2 Years. | 2 to 5 Years. | Total under 5 Years. | 5 to 10 Years. | 10 to 20 Years. | 20 to 40 Years. | 40 to 60 Years. | 60 to 80 Years. | 80 Years and over. | Male | Female | United States. | Foreign | | | |
| ZYMOTIC | | | | | | | | | | | | | | | | | |
| Small Pox..... | | | | | | | | | | | 2 | 4 | 5 | 1 | 6 | 0.03 | |
| Measles..... | | 2 | 4 | 6 | | | | | | | 9 | 9 | 17 | 1 | 18 | 0.11 | |
| Scarlet Fever..... | 2 | 10 | 12 | 5 | 1 | | | | | | 17 | 43 | 57 | 3 | 90 | 0.56 | |
| Diphtheria..... | 6 | 18 | 45 | 69 | 20 | 1 | | | | | 94 | 71 | 160 | 5 | 165 | 1.03 | 1 |
| Croup..... | 9 | 38 | 86 | 133 | 28 | 4 | | | | | 12 | 16 | 28 | | 28 | 0.17 | 1 |
| Whooping Cough..... | 18 | 6 | 4 | 28 | | | | | | | 49 | 28 | 40 | 37 | 77 | 0.48 | 1 |
| Typhoid Fever..... | | 2 | 2 | 9 | 20 | 27 | 11 | 8 | | | 10 | 15 | 19 | 6 | 25 | 0.15 | 4 |
| Malarial Fevers..... | 1 | | 3 | 4 | 2 | 9 | 4 | 3 | 3 | | 98 | 97 | 185 | 10 | 195 | 1.21 | 6 |
| Diarrhoeal Diseases..... | 119 | 26 | 4 | 179 | | 1 | 3 | 10 | 2 | | 45 | 44 | 73 | 16 | 89 | 0.55 | 1 |
| Other Zymotic Diseases..... | 43 | 6 | 6 | 55 | 2 | 16 | 13 | 2 | 1 | | | | | | | | |

| CONSTITUTIONAL. | | | | | | | | | | | | | | | | | |
|----------------------------------|-----|------|------|------|-----|------|------|------|------|------|-----|------|------|------|------|------|----|
| Cancer | 7 | 44 | 35 | 4 | 30 | 60 | 30 | 60 | 90 | 0.56 | 1 | | | | | | |
| Phthisis Pulmonalis..... | 145 | 263 | 122 | 40 | 277 | 196 | 277 | 196 | 473 | 2.95 | 16 | | | | | | |
| Marasmus and Scrofula..... | 117 | 15 | 3 | 135 | 1 | 3 | .... | 1... | 74 | 66 | 120 | 20 | 140 | 0.87 | 5 | | |
| Other Constitutional Diseases.. | 17 | 7 | 15 | 39 | 11 | 8 | 19 | 13 | 9 | 2 | 56 | 45 | 71 | 30 | 101 | 0.63 | 2 |
| LOCAL. | | | | | | | | | | | | | | | | | |
| Nervous | | | | | | | | | | | | | | | | | |
| Apoplexy | 3 | 32 | 45 | 4 | 47 | 37 | 24 | 60 | 84 | 0.52 | 2 | | | | | | |
| Paralysis | *1 | 1 | .... | 2 | 8 | 25 | 7 | 19 | 24 | 21 | 22 | 43 | 0.26 | .. | | | |
| Meningitis | 50 | 24 | 23 | 97 | 6 | 3 | 15 | 13 | 6 | .. | 92 | 48 | 119 | 21 | 140 | 0.87 | 3 |
| Convulsions | 123 | 26 | 14 | 163 | 4 | .. | 1 | 1 | | 89 | 80 | 156 | 13 | 169 | 1.05 | 8 | |
| Other Nervous Diseases | 35 | 14 | 17 | 66 | 3 | 6 | 13 | 22 | 34 | 5 | 88 | 61 | 103 | 46 | 149 | 0.93 | 1 |
| Circulatory— | | | | | | | | | | | | | | | | | |
| Diseases of the Heart | 1 | 1 | 6 | 15 | 62 | 62 | 73 | 2 | 129 | 92 | 106 | 115 | 221 | 1.39 | 6 | | |
| Other Circulatory Diseases | 2 | 1 | 1 | 1 | 1 | 4 | 4 | 1 | 5 | 0.03 | .. | | | | | | |
| Respiratory— | | | | | | | | | | | | | | | | | |
| Bronchitis | 73 | 28 | 22 | 123 | 6 | 3 | 10 | 23 | 33 | 13 | 110 | 101 | 150 | 61 | 211 | 1.31 | 12 |
| Pneumonia | 29 | 26 | 13 | 68 | 10 | 11 | 35 | 55 | 50 | 6 | 131 | 104 | 153 | 82 | 235 | 1.46 | 6 |
| Other Respiratory Diseases.... | 11 | 3 | 2 | 16 | 5 | 1 | 14 | 24 | 14 | 1 | 45 | 10 | 42 | 33 | 75 | 0.46 | 2 |
| Digestive— | | | | | | | | | | | | | | | | | |
| Diseases of Stomach and Bowels | 68 | 5 | 2 | 75 | 5 | 4 | 17 | 22 | 25 | .. | 70 | 78 | 113 | 35 | 148 | 0.92 | 4 |
| Peritonitis | 1 | .. | 1 | 1 | 4 | 13 | 8 | 3 | .. | 12 | 18 | 20 | 10 | 30 | 0.18 | 1 | |
| Diseases of the Liver..... | 1 | .... | 1 | .... | 9 | 18 | 11 | 2 | 28 | 13 | 13 | 28 | 41 | 0.25 | 1 | | |
| Other Digestive Diseases..... | 2 | .... | 2 | .... | 1 | .... | 1 | .. | 3 | 1 | 4 | .... | 4 | 0.02 | .. | | |

* Following diphtheria.

TABLE No. 3.—Continued.
ANNUAL REPORT OF DEATHS IN THE CITY OF NEWARK, N. J., WITH AGES OF DECEDENTS, &c.

| CAUSES OF DEATH. | AGE BY YEARS. | | | | | | | | | | SEX. | | NATIVITY | | Total, both Sexes. | Annual Death Rate, per 1,000. | Colored. |
|----------------------------------|-------------------|---------------|---------------|----------------------|----------------|-----------------|-----------------|-----------------|-----------------|--------------------|-------|---------|----------------|----------|--------------------|----------------------------------|----------|
| | 1 Year and under. | 1 to 2 Years. | 2 to 5 Years. | Total under 5 Years. | 5 to 10 Years. | 10 to 20 Years. | 20 to 40 Years. | 40 to 60 Years. | 60 to 80 Years. | 80 Years and over. | Male. | Female. | United States. | Foreign. | | | |
| LOCAL.— <i>Con.</i> | | | | | | | | | | | | | | | | | |
| <i>Urinary Organs—</i> | | | | | | | | | | | | | | | | | |
| Bright's Disease..... | | 1 | | 1 | 2 | 5 | 50 | 49 | 28 | 4 | 63 | 56 | 53 | 66 | 119 | 0.74 | 4 |
| Other Diseases of Urinary Organs | 2 | | | 2 | 3 | 4 | 5 | 7 | 1 | 14 | | 8 | 15 | 7 | 22 | 0.13 | 2 |
| Other Local Diseases. | | 1 | | 1 | 1 | | 1 | 6 | 1 | 1 | 1 | 10 | 6 | 5 | 11 | 0.06 | |
| DEVELOPMENTAL. | | | | | | | | | | | | | | | | | |
| <i>Children—</i> | | | | | | | | | | | | | | | | | |
| Asthemia and Premature Birth.. | 98 | | | 98 | | | | | | | 57 | 41 | 98 | | 98 | 0.61 | 3 |
| Congenital Deformity..... | 9 | | 1 | 10 | | | | | | | 7 | 3 | 10 | | 10 | 0.06 | |
| Other Diseases of Children. . | 47 | 1 | 1 | 49 | | | | | | | 25 | 24 | 49 | | 49 | 0.30 | |

| DEVELOPMENTAL.— <i>Con.</i> | | | | | | | | | | | | | | | | | |
|-----------------------------|-------|-------|-------|-------|-------|-------|-------|----|-------|-------|----|----|----|----|------|------|----|
| <i>Women—</i> | | | | | | | | | | | | | | | | | |
| Puerperal Diseases..... | ..... | ..... | ..... | ..... | ..... | ..... | 23 | 2 | ..... | ..... | 25 | 15 | 10 | 25 | 0.15 | 2 | |
| Old Age..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 35 | 46 | 24 | 57 | 38 | 43 | 81 | 0.50 | .. | |
| ACCIDENT AND VIOLENCE. | | | | | | | | | | | | | | | | | |
| Accidents..... | 2 | 3 | 4 | 9 | 15 | 13 | 26 | 29 | 10 | .. | 88 | 14 | 63 | 37 | 102 | 0.63 | 4 |
| Homicide..... | 1 | .. | .. | 1 | .. | .. | 2 | 2 | .. | .. | 4 | 1 | 2 | 3 | 5 | 0.03 | .. |
| Suicide..... | ..... | ..... | ..... | ..... | ..... | ..... | 11 | 13 | 4 | .. | 26 | 2 | 11 | 17 | 28 | 0.17 | .. |

RECAPITULATION.

| | | |
|---|--------|--------------------------------|
| Population, January 1, 1887..... | ..... | .....estimated, 160,319 |
| Total Deaths from Zymotic Diseases..... | 693. | Death Rate, 4.33 |
| “ “ “ Constitutional Diseases | 804. | “ “ 5.03 |
| “ “ “ Local Diseases..... | 1,707. | “ “ 10.67 |
| “ “ “ Developmental Diseases..... | 263. | “ “ 1.64 |
| “ “ “ Accident and Violence. | 135. | “ “ 0.84 |
| Total Deaths..... | | 3,602 |
| Still Births..... | | 200 |
| | | Total Death Rate 22.51 |

TABLE No. 4.

SHOWING MORTALITY BY MONTHS, WITH AGES OF DECEDENTS, TOGETHER WITH SEX, NATIVITY AND SOCIAL STATE.

| AGES. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Grand Total. |
|-----------------------------------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|--------------|
| Under 1 year..... | 53 | 72 | 82 | 68 | 57 | 54 | 144 | 114 | 84 | 67 | 50 | 68 | 913 |
| Between 1 and 2 years | 25 | 26 | 24 | 20 | 10 | 13 | 15 | 24 | 13 | 28 | 25 | 27 | 250 |
| " 2 " 5 " | 26 | 31 | 32 | 24 | 14 | 26 | 16 | 15 | 14 | 27 | 27 | 32 | 284 |
| Total under 5 years..... | 104 | 129 | 138 | 112 | 81 | 93 | 175 | 153 | 111 | 122 | 102 | 127 | 1,447 |
| Between 5 and 10 years..... | 9 | 15 | 16 | 8 | 6 | 11 | 5 | 8 | 7 | 20 | 16 | 14 | 135 |
| " 10 " 20 " | 11 | 13 | 32 | 9 | 16 | 17 | 8 | 11 | 12 | 10 | 7 | 3 | 149 |
| " 20 " 30 " | 35 | 25 | 33 | 30 | 29 | 22 | 20 | 28 | 27 | 21 | 26 | 28 | 324 |
| " 30 " 40 " | 25 | 33 | 31 | 33 | 29 | 25 | 26 | 22 | 27 | 20 | 21 | 27 | 319 |
| " 40 " 50 " | 28 | 25 | 32 | 21 | 31 | 18 | 27 | 30 | 34 | 26 | 26 | 21 | 319 |
| " 50 " 60 " | 14 | 19 | 28 | 27 | 24 | 31 | 26 | 31 | 23 | 18 | 24 | 25 | 290 |
| " 60 " 70 " | 20 | 31 | 33 | 23 | 22 | 22 | 19 | 25 | 20 | 23 | 27 | 32 | 297 |
| " 70 " 80 " | 14 | 18 | 26 | 17 | 19 | 17 | 12 | 21 | 15 | 25 | 16 | 15 | 215 |
| " 80 " 90 " | 9 | 10 | 10 | 5 | 8 | 16 | 7 | 5 | 7 | 9 | 4 | 8 | 98 |
| " 90 " 100 " | 1 | .... | 2 | 1 | .... | .... | .... | 1 | 1 | 2 | 1 | .. | 9 |
| Totals | 270 | 318 | 381 | 286 | 265 | 272 | 325 | 335 | 284 | 296 | 270 | 300 | 3,602 |

TABLE No. 4.—Continued.

SHOWING MORTALITY BY MONTHS, WITH AGES OF DEPENDENTS, TOGETHER WITH SEX, NATIVITY AND SOCIAL STATE.

| | | Jan. | Feb. | March. | April. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Grand Total. |
|--------------------|--------------|------|------|--------|--------|------|-------|-------|------|-------|------|------|------|--------------|
| SEX. | | | | | | | | | | | | | | |
| White | Males..... | 157 | 158 | 199 | 159 | 139 | 148 | 166 | 188 | 154 | 161 | 134 | 157 | 1,920 |
| " | Females..... | 106 | 151 | 176 | 116 | 116 | 115 | 148 | 137 | 123 | 129 | 129 | 136 | 1,582 |
| Colored | Males..... | 3 | 4 | 2 | 7 | 6 | 5 | 5 | 7 | 4 | 4 | 4 | 5 | 56 |
| " | Females..... | 1 | 5 | 4 | 4 | 4 | 4 | 6 | 3 | 3 | 2 | 3 | 2 | 44 |
| Totals..... | | 270 | 318 | 381 | 286 | 265 | 272 | 325 | 335 | 284 | 296 | 270 | 300 | 3,602 |
| NATIVITY. | | | | | | | | | | | | | | |
| United States..... | | 186 | 229 | 273 | 202 | 164 | 186 | 224 | 242 | 192 | 210 | 177 | 215 | 2,500 |
| Foreign..... | | 84 | 89 | 108 | 84 | 101 | 86 | 101 | 93 | 92 | 86 | 93 | 85 | 1,102 |
| Totals..... | | 270 | 318 | 381 | 286 | 265 | 272 | 325 | 335 | 284 | 296 | 270 | 300 | 3,602 |
| SOCIAL STATE. | | | | | | | | | | | | | | |
| Single..... | | 155 | 178 | 225 | 165 | 135 | 149 | 210 | 210 | 164 | 178 | 157 | 176 | 2,102 |
| Married..... | | 84 | 94 | 104 | 82 | 94 | 87 | 83 | 82 | 81 | 75 | 70 | 83 | 1,019 |
| Widow..... | | 13 | 28 | 39 | 25 | 25 | 20 | 20 | 21 | 21 | 26 | 25 | 24 | 287 |
| Widower..... | | 18 | 17 | 13 | 12 | 11 | 16 | 10 | 21 | 16 | 15 | 17 | 15 | 181 |
| Not Stated..... | | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 2 | 13 |
| Totals..... | | 270 | 318 | 381 | 286 | 265 | 272 | 325 | 335 | 284 | 296 | 270 | 300 | 3,602 |

TABLE No. 5.

SHOWN, MONTHLY MORTALITY BY WARDS IN THE CITY OF NEWARK, WITH POPULATION AND DEATH RATE OF EACH.

| WARDS. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Total. | Population. | Death Rate. |
|---------------------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|--------|-------------|-------------|
| First | 12 | 12 | 13 | 13 | 6 | 16 | 19 | 11 | 6 | 16 | 20 | 13 | 157 | 8,232 | 19.07 |
| Second. | 8 | 11 | 15 | 18 | 16 | 15 | 18 | 14 | 4 | 15 | 13 | 24 | 171 | 7,461 | 23.91 |
| Third | 7 | 11 | 11 | 9 | 4 | 12 | 6 | 13 | 6 | 5 | 12 | 5 | 101 | 6,797 | 14.86 |
| Fourth | 13 | 10 | 16 | 11 | 7 | 9 | 10 | 9 | 13 | 13 | 13 | 14 | 138 | 6,493 | 21.25 |
| Fifth. | 4 | 13 | 7 | 5 | 15 | 6 | 5 | 8 | 11 | 10 | 6 | 3 | 93 | 5,914 | 15.73 |
| Sixth | 36 | 35 | 52 | 38 | 32 | 30 | 39 | 34 | 43 | 34 | 29 | 31 | 433 | 20,999 | 20.62 |
| Seventh. | 20 | 17 | 28 | 22 | 12 | 15 | 20 | 18 | 24 | 7 | 12 | 20 | 215 | 9,332 | 23.04 |
| Eighth | 25 | 31 | 42 | 18 | 21 | 31 | 31 | 33 | 23 | 25 | 23 | 22 | 314 | 15,513 | 20.24 |
| Ninth. | 10 | 11 | 13 | 6 | 13 | 6 | 6 | 8 | 15 | 7 | 5 | 5 | 106 | 7,030 | 15.08 |
| Tenth. | 22 | 24 | 19 | 10 | 19 | 16 | 24 | 13 | 31 | 23 | 23 | 28 | 251 | 12,365 | 20.30 |
| Eleventh | 12 | 15 | 18 | 14 | 7 | 12 | 12 | 15 | 11 | 10 | 6 | 12 | 144 | 8,399 | 17.14 |
| Twelfth | 37 | 36 | 33 | 28 | 33 | 20 | 44 | 54 | 30 | 34 | 33 | 32 | 414 | 15,891 | 26.05 |
| Thirteenth | 33 | 53 | 47 | 43 | 34 | 45 | 63 | 65 | 38 | 53 | 32 | 40 | 544 | 23,686 | 23.97 |
| Fourteenth | 3 | 3 | 9 | 7 | 5 | 3 | 3 | 3 | 3 | 4 | 2 | 11 | 56 | 4,450 | 12.58 |
| Fifteenth. | 11 | 21 | 21 | 14 | 16 | 15 | 11 | 17 | 17 | 17 | 22 | 9 | 191 | 7,755 | 24.63 |
| Total by Wards | 243 | 303 | 344 | 265 | 240 | 241 | 311 | 314 | 263 | 273 | 252 | 269 | 3,328 | 160,319 | 20.40 |
| Public Institutions | 17 | 15 | 37 | 21 | 25 | 31 | 14 | 21 | 21 | 23 | 19 | 31 | 274 | | 1.71 |
| Grand Total | 270 | 318 | 381 | 286 | 265 | 272 | 325 | 335 | 284 | 296 | 270 | 300 | 3,602 | 160,319 | 22.51 |

TABLE No. 6.

SHOWING MONTHLY MORTALITY BY WARDS, FROM ZYMOTIC DISEASES AND OTHER CHIEF CAUSES
JANUARY.

| WARDS | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | Total |
|-----------------------------|----|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|-------|
| All causes, under 5 years.. | 2 | 2 | 4 | 3 | ... | 18 | 4 | 8 | 2 | 12 | 4 | 15 | 20 | 3 | 6 | 103 |
| Small-pox..... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 |
| Measles..... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 |
| Scarlet Fever | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Diphtheria.. | .. | .. | 1 | .. | .. | 2 | 2 | .. | .. | .. | .. | 2 | 2 | .. | .. | 9 |
| Whooping Cough | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 |
| Typhoid Fever.... | .. | 1 | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | 1 | .. | .. | 4 |
| Malarial Fevers..... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Diarrhoeal Diseases..... | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 2 | .. | .. | 5 |
| Cerebro-Spinal Mening tis. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 |
| Other Zymotic Diseases... | 1 | 1 | 2 | 3 | .. | 4 | 2 | 2 | 1 | 2 | 2 | 5 | 4 | .. | 3 | 32 |
| Total Zymotic Diseases... | 2 | 2 | 3 | 3 | .. | 6 | 5 | 4 | 2 | 3 | 2 | 8 | 10 | .. | 3 | 53 |
| Marasmus | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 3 |
| Phthisis | 3 | 2 | .. | 1 | .. | 6 | 4 | 4 | 1 | 1 | 3 | 5 | 3 | .. | .. | 33 |
| Bronchitis..... | .. | 1 | .. | .. | 1 | 1 | 1 | 1 | .. | 3 | 1 | 2 | 2 | 1 | .. | 14 |
| Pneumonia | 2 | .. | .. | 1 | .. | 3 | 3 | 3 | .. | 3 | 2 | 2 | 4 | .. | 1 | 24 |
| Suicide | .. | .. | .. | 1 | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 1 | 4 |
| Accidents. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | .. | .. | .. | 4 |

FEBRUARY.

| | | | | | | | | | | | | | | | | |
|---------------------------------|---|---|---|---|---|----|---|---|---|---|---|----|----|---|---|-----|
| All causes, under 5 years.. | 5 | 8 | 2 | 2 | 5 | 15 | 9 | 6 | 5 | 9 | 6 | 19 | 26 | 1 | 9 | 127 |
| Small-pox..... | | | | | | | | | | | | | | | | |
| Measles | | | | | | | | | | | | | | | | |
| Scarlet Fever..... | | | | | | | | | | | | 1 | | | | 1 |
| Diphtheria | | | | | | 2 | | | | 1 | | 2 | 4 | | | 9 |
| Whooping Cough | | | | | | | | | | 1 | 1 | | 1 | | | 3 |
| Typhoid Fever..... | | | | | | 1 | | | 1 | 1 | | | 3 | | 2 | 8 |
| Malarial Fevers..... | | 1 | | | | | | 1 | | | | | | | | 2 |
| Diarrhoeal Diseases..... | 1 | 1 | | 1 | | | | 1 | | | | | 1 | | | 5 |
| Cerebro-Spinal Meningitis | | | | | | | 1 | | | | | | | | | 1 |
| Other Zymotic Diseases.. | 1 | 2 | | | 2 | 1 | 2 | 1 | 1 | | 1 | 3 | 6 | | 3 | 23 |
| Total Zymotic Diseases... | 2 | 4 | | 1 | 2 | 4 | 3 | 3 | 2 | 3 | 2 | 6 | 15 | | 5 | 52 |
| Marasmus | | | | 1 | | | 1 | | | | | 2 | 2 | | 3 | 9 |
| Plithis | 2 | | | 2 | | 6 | 3 | 3 | 2 | 4 | 1 | 3 | 11 | | 1 | 38 |
| Bronchitis | 1 | 1 | | 1 | 2 | 6 | | | 1 | 2 | 1 | 6 | 3 | | 1 | 25 |
| Pneumonia..... | 3 | | 3 | 1 | 1 | 1 | 1 | 3 | 1 | 4 | 1 | 3 | 1 | 1 | 2 | 26 |
| Suicide | | | | | | 1 | | | | | | | | | | 1 |
| Accidents..... | | | | | | | | | | | | 2 | 1 | | | 3 |

TABLE No. 6.—Continued.
SHOWING MONTHLY MORTALITY BY WARDS, FROM ZYMOTIC DISEASES AND OTHER CHIEF CAUSES
MARCH.

[illegible]

APRIL.

| | | | | | | | | | | | | | | | | |
|-----------------------------|---|---|---|---|---|----|---|----|---|----|---|----|----|---|---|-----|
| All causes, under 5 years.. | 5 | 8 | 3 | 3 | 3 | 19 | 5 | 13 | 2 | 11 | 2 | 14 | 14 | 4 | 6 | 112 |
| Small-pox..... | | | | | | | | | | | | | | | | |
| Measles..... | | | | | | | | | | | | | | | | |
| Scarlet Fever..... | | 1 | | | | | | | | | | | | | | 1 |
| Diphtheria..... | | | | | | 1 | | 1 | | | 1 | 1 | 1 | | | 5 |
| Whooping Cough .. | | | | | | 2 | | | | 2 | | 1 | | | 1 | 6 |
| Typhoid Fever..... | | | | | | | | | | 1 | | | 2 | | | 3 |
| Malarial Fevers..... | | | | | | 1 | | | | | | | 1 | | | 2 |
| Diarrhœal Diseases. | | | | | | | | 1 | 1 | | | | | | | 2 |
| Cerebro-Spinal Meningitis. | | | | | | | | 1 | | | | | | | | 1 |
| Other Zymotic Diseases... | 3 | 3 | 1 | | | 4 | | 1 | | 1 | 1 | 2 | 2 | | | 18 |
| Total Zymotic Diseases... | 3 | 4 | 1 | | | 8 | | 4 | 1 | 4 | 2 | 4 | 6 | | 1 | 38 |
| Marasmus | | | | | | 1 | | 1 | | 1 | 1 | | | 1 | | |
| Phthisis ... | 1 | 2 | 1 | 3 | 1 | 3 | 2 | | 1 | 4 | 3 | 5 | 5 | 1 | 3 | 35 |
| Bronchitis..... | 1 | 2 | 1 | | | 3 | 4 | 3 | | 1 | 1 | 1 | 3 | | 2 | 22 |
| Pneumonia | 2 | 1 | 1 | | 1 | 7 | 2 | 3 | | 2 | | 5 | 2 | | | 26 |
| Suicide..... | | | | 1 | | | | | | | | | 1 | 1 | | 3 |
| Accidents. | | | | | 1 | 1 | | 1 | | | 1 | 2 | 1 | | | 7 |

TABLE No. 6.—Continued.

SHOWING MONTHLY MORTALITY BY WARDS, FROM ZYMOTIC DISEASES AND OTHER CHIEF CAUSES.

MAY.

| WARDS | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | Total. |
|-------------------------------------|---|---|---|---|---|----|---|---|---|----|----|----|----|----|----|--------|
| All causes, under 5 years . | 2 | 8 | 1 | 1 | 4 | 14 | 2 | 5 | 2 | 4 | 5 | 13 | 13 | 1 | 4 | 79 |
| Small pox | | | | | | | | | | | | | | | | ... |
| Measles | | | | | | | | | | | | | | | | ... |
| Scarlet Fever | | | | | | | | | | | | 1 | | | 1 | 2 |
| Diphtheria. | | | | | | | | | | 1 | | | 1 | | | 2 |
| Whooping Cough. | | | | | 2 | | | | | | | 1 | | | | 3 |
| Typhoid Fever. | | | | | | 2 | | | | 1 | 1 | 1 | | | | 5 |
| Malarial Fevers. | | 1 | | | | | | | | | | | | | | 1 |
| Diarrheal Diseases | | | | | 1 | | | | | | | 1 | 3 | | | 5 |
| Cerebro Spinal Meningitis | | | | | | | | | | | | | | | 1 | 1 |
| Other Zymotic Diseases. | | | | | | 1 | | 1 | 1 | | | 3 | 3 | | | 9 |
| Total Zymotic Diseases. | | 1 | | | 3 | 3 | | 1 | 1 | 2 | 1 | 7 | 7 | | 2 | 28 |
| Marasmus | 1 | 1 | | | | 1 | | | | | 1 | 1 | | | | 5 |
| Patulis | | 3 | 2 | 1 | 3 | 5 | 4 | 2 | 3 | 4 | | 8 | 2 | 2 | 2 | 41 |
| Bronchitis. | 1 | 2 | | 1 | 1 | 1 | 1 | 4 | 1 | | | 1 | 1 | 1 | 1 | 16 |
| Pneumonia | | | | 2 | 1 | 5 | 3 | 2 | 1 | | 1 | 2 | | | | 17 |
| Suicide. | | | | | 1 | | | | | | | | | | | 1 |
| Accidents. | | | | | 1 | | | | | 1 | | | 2 | 1 | | 5 |

JUNE.

| | | | | | | | | | | | | | | | | |
|-------------------------------------|---|---|---|---|---|----|---|---|---|---|---|----|----|---|---|----|
| All causes, under 5 years . | 4 | 4 | 3 | 3 | 2 | 10 | 5 | 7 | 2 | 8 | 6 | 10 | 20 | 1 | 4 | 89 |
| Small-pox | | | | | | | | | | | | | | | | |
| Measles | | | | | | | | | | | | | | | | |
| Scarlet Fever | | | | | | | 3 | | | 1 | | | | | 1 | 5 |
| Diphtheria | | | 1 | 1 | | | | | | 1 | | | 3 | | | 6 |
| Whooping Cough | 1 | | | | | | | | | | | | | | | 1 |
| Typhoid Fever | | 1 | | | | | | | | | | | 1 | | 1 | 3 |
| Malarial Fevers | 1 | | | | | | | | | | 1 | | | | | 2 |
| Diarrhoeal Diseases | | | | 1 | | | | 2 | | 1 | | 1 | 3 | | | 8 |
| Cerebro-Spinal Meningitis | | | | | | | 1 | | | | 1 | | | | | 2 |
| Other Zymotic Diseases | | 1 | 1 | | 1 | 2 | | 2 | | 2 | 1 | | 2 | | 1 | 13 |
| Total Zymotic Diseases | 2 | 2 | 2 | 2 | 1 | 2 | 4 | 4 | | 5 | 3 | 1 | 9 | | 3 | 40 |
| Marasmus | | | 1 | | | | | 1 | | | | | 2 | | | 4 |
| Pnthisis | 4 | 1 | 1 | | 1 | 5 | 3 | 3 | 1 | 1 | 1 | 2 | 5 | | 2 | 30 |
| Bronchitis | 1 | 1 | 1 | | | 4 | | 2 | 1 | | | | 2 | | | 12 |
| Pneumonia | 1 | | | | | 1 | | 1 | | | | | 1 | | | 4 |
| Suicide | | 1 | 1 | | | | | | | | | 1 | | 1 | | 4 |
| Accidents | 1 | 2 | | | | | | | | | | 4 | | | | 7 |

TABLE No. 6.—Continued.

SHOWING MONTHLY MORTALITY BY WARDS, FROM ZYMOTIC DISEASES AND OTHER CHIEF CAUSES.
JULY.

| WARDS | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | Total |
|-------------------------------------|---|---|---|---|---|----|----|----|---|----|----|----|----|-----|----|-------|
| All cases, under 5 years . | 9 | 8 | 2 | 6 | 4 | 24 | 11 | 15 | 1 | 13 | 8 | 32 | 37 | ... | 5 | 175 |
| Small-pox | | | | | | | | | | | | | | | | |
| Measles | | | | | | | | | | | | | | | | |
| Scarlet Fever | | | | | | | | | | | | | | | | |
| Diphtheria | | | | | | | | | | | | | | | | |
| Whooping Cough | | | | | | | | | | | 1 | | 1 | | | 2 |
| Typhoid Fever | | | 1 | | | 1 | | 1 | | 1 | | 1 | | | | 5 |
| Malarial Fevers | | | | 1 | | | | | | | | | 1 | | | 2 |
| Diarrhœal Diseases | 5 | 5 | 1 | 1 | 2 | 6 | 3 | 5 | 1 | 5 | 4 | 11 | 10 | | 4 | 63 |
| Cerebro-Spinal Meningitis | | | | | | | | | | | | | | | | |
| Other Zymotic Diseases | | | | | | 1 | 1 | 2 | | 3 | | 1 | 2 | | | 10 |
| Total Zymotic Diseases | 5 | 5 | 2 | 2 | 2 | 8 | 4 | 8 | 1 | 9 | 5 | 13 | 14 | | 4 | 82 |
| Marasmus | | | | 1 | 1 | 3 | 1 | 4 | | 1 | 1 | 4 | 6 | | | 22 |
| Phthisis | 1 | 3 | | | 1 | 3 | 5 | 4 | 1 | | | 3 | 5 | 1 | 3 | 30 |
| Bronchitis | 1 | | | | | 1 | 1 | | | | | 1 | 3 | | | 7 |
| Pneumonia | | 1 | | | | | | | | | | 3 | | | | 4 |
| Suicide | | | | 1 | | | | | | | | 1 | 1 | | | 3 |
| Accidents | | | 1 | | | | 1 | | | | | 2 | 2 | | | 6 |

AUGUST.

| | | | | | | | | | | | | | | | | |
|-------------------------------------|---|---|---|---|---|----|---|----|---|---|---|----|----|---|---|-----|
| All causes, under 5 years.. | 2 | 4 | 5 | 3 | 3 | 21 | 9 | 11 | 3 | 6 | 6 | 32 | 38 | 1 | 8 | 152 |
| Small-pox | | | | | | | | | | | | | | | | |
| Measles | | | | | | | | | | | | | | | | |
| Scarlet Fever | | | | | | | 1 | | | | 1 | | | | | 2 |
| Diphtheria | | | | | | | | | | | | | 4 | | | 4 |
| Whooping Cough | | 1 | 1 | | 1 | | | | | | | 2 | | | | 5 |
| Typhoid Fever | | 1 | | 1 | | | | 2 | | | 1 | 1 | | | | 6 |
| Malarial Fevers | | | | | | | 1 | | | | | | | | | 1 |
| Diarrhœal Diseases | | 3 | 3 | 1 | | 6 | 4 | 1 | 2 | 1 | 4 | 12 | 13 | 1 | 2 | 53 |
| Cerebro-Spinal Meningitis | | 1 | | | | 1 | | | | | | | | | | 2 |
| Other Zymotic Diseases | 1 | | | 1 | | 1 | 1 | 1 | | 1 | | 1 | 3 | | 2 | 12 |
| Total Zymotic Diseases | 1 | 6 | 4 | 3 | 1 | 8 | 7 | 4 | 2 | 2 | 6 | 16 | 20 | 1 | 4 | 85 |
| Marasmus | 1 | | 1 | | | 2 | 2 | 2 | | | 1 | 6 | 5 | | 1 | 21 |
| Phthisis | 3 | 1 | 3 | | 1 | 3 | 1 | 7 | 2 | | 3 | 5 | 6 | 1 | 2 | 38 |
| Bronchitis | | | | | | 1 | | 1 | | 1 | | 1 | | | 1 | 5 |
| Pneumonia | 1 | 2 | | 1 | | | 1 | | | | | 1 | 1 | | | 7 |
| Suicide | | | | | | | | | | | | 1 | 2 | | | 3 |
| Accidents | | | | 1 | | 2 | 1 | 4 | | 2 | 1 | 3 | | | | 14 |

TABLE No. 6.—Continued.

SHOWING MONTHLY MORTALITY BY WARDS, FROM ZYMOTIC DISEASES AND OTHER CHIEF CAUSES
SEPTEMBER.

| WARDS | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | Total. |
|-------------------------------------|---|---|---|---|---|----|----|---|---|----|----|----|----|----|----|--------|
| All causes, under 5 years.. | 1 | 1 | 1 | 3 | 5 | 25 | 10 | 4 | 5 | 7 | 8 | 13 | 18 | 3 | 7 | 111 |
| Small pox | | | | | | | | | | | | | | | | |
| Measles | | | | | | | | | | | | | | | | |
| Scarlet Fever | | | | | | | | | | | 1 | | | | | 1 |
| Diphtheria | | | | | | 1 | | | 2 | | | | 2 | | 3 | 8 |
| Whooping Cough | | | | | | | | | | | | 1 | | 2 | | 3 |
| Typhoid Fever | | | | | 2 | 1 | | | 2 | 1 | 1 | | | | | 7 |
| Malarial Fevers | | | 1 | | | | | | 1 | | | 1 | | | | 3 |
| Diarrhœal Diseases | | | | 1 | | 7 | 2 | 2 | | 1 | 2 | 3 | 4 | | 2 | 24 |
| Cerebro-Spinal Meningitis | | | | 1 | | | | | | | | | | | | 1 |
| Other Zymotic Diseases | | | | 1 | 1 | 1 | 2 | 1 | 1 | 2 | | 1 | 6 | | | 16 |
| Total Zymotic Diseases | | | 1 | 3 | 1 | 11 | 5 | 3 | 4 | 5 | 4 | 7 | 12 | 2 | 5 | 63 |
| Mara-mus | 1 | | | | 3 | 3 | 2 | | | | | 3 | 3 | 1 | | 16 |
| P'htisis | | 1 | | 5 | 1 | 3 | 5 | 5 | | 6 | | 4 | 7 | | 3 | 40 |
| Bronchitis | | 1 | | | | | 1 | 2 | 1 | | 1 | 1 | | | | 7 |
| Pneumonia | | | | 2 | | 1 | | | | | | | 1 | | | 4 |
| Suicide | | | | | | | | | | | | | | | | |
| Accidents | 1 | | | 1 | 2 | | | 2 | | | | 2 | | | | 8 |

OCTOBER.

| | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|----|---|----|-----|----|---|----|----|---|----|-----|
| All causes, under 5 years.. . . . | 8 | 3 | 6 | 6 | 14 | 2 | 10 | ... | 10 | 7 | 15 | 29 | 1 | 11 | 122 |
| Small-pox | | | | | | | | | | | | | | | |
| Measles | | | | | | | | | | | | | | | |
| Scarlet Fever | | | | | | | | | | | 2 | 1 | | | 3 |
| Diphtheria. | | | | 1 | | 1 | | | 1 | | 2 | 3 | | | 8 |
| Whooping Cough | | | | | | | 1 | | | | | | | | 1 |
| Typhoid Fever..... | | | | | 1 | | | | 1 | | 1 | 2 | | | 5 |
| Malarial Fevers..... | | 1 | | | | 1 | | 1 | | | 1 | | | | 4 |
| Diarrhœal Diseases..... | | 2 | | 1 | | | 1 | 1 | | 4 | | 2 | 3 | 1 | 15 |
| Cerebro-Spinal Meningitis..... | | | | | | | | | | | | 1 | | | 1 |
| Other Zymotic Diseases... 1 | 1 | 1 | 1 | | | 1 | | 4 | | | | 9 | 1 | 6 | 24 |
| Total Zymotic Diseases... 1 | 4 | 1 | 1 | 1 | 3 | 2 | 7 | | 6 | 1 | 7 | 19 | 1 | 7 | 61 |
| Marasmus | | 1 | | | 1 | 6 | | | | 1 | 1 | 2 | 4 | | 17 |
| Pathosis | 1 | 1 | | 2 | 2 | 2 | 1 | 4 | | 3 | | 2 | 6 | 1 | 27 |
| Bronchitis | 1 | 3 | 1 | 1 | 3 | 2 | | 2 | | 1 | | 3 | 3 | | 20 |
| Pneumonia..... | 1 | | | | 1 | 2 | | | | 1 | 1 | 4 | 3 | | 13 |
| Suicide..... | | | | | | | | | 1 | | | | | | 1 |
| Accidents | 1 | | | 2 | | | | | | | | 3 | | | 6 |

TABLE No. 6.—Continued.

SHOWING MONTHLY MORTALITY BY WARDS, FROM ZYMOTIC DISEASES AND OTHER CHIEF CAUSES
NOVEMBER.

| WARDS | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | Total. |
|-------------------------------------|---|---|---|---|---|----|---|----|---|----|----|----|----|----|----|--------|
| All causes, under 5 years.. | 3 | 2 | 4 | 3 | | 14 | 6 | 11 | | 7 | 3 | 19 | 17 | | 12 | 101 |
| Small-pox | | | | | | | | | | | | | | | | |
| Measles | | | | | | | | | | | | | | | 1 | 1 |
| Scarlet Fever | | | | | | 1 | 1 | | | | | | | | | 2 |
| Diphtheria | 1 | | | | | 4 | | 2 | | | | | 7 | 1 | 1 | 16 |
| Whooping Cough | | | | | | | 1 | | | | | | | | | 1 |
| Typhoid Fever | 3 | | | | | | | 1 | 1 | | | 2 | | | | 7 |
| Malarial Fevers | | | | | | | | | | | | | | | | |
| Diarrhoeal Diseases | | | | 1 | | 1 | | | | | | 1 | 1 | | | 4 |
| Cerebro-Spinal Meningitis | | | | | | 1 | | | | | | 1 | | | | 2 |
| Other Zymotic Diseases | 1 | 1 | 1 | | 1 | 3 | 1 | 4 | | 3 | | 3 | 5 | | 2 | 25 |
| Total Zymotic Diseases | 5 | 1 | 1 | 1 | 1 | 10 | 3 | 7 | 1 | 3 | | 7 | 13 | 1 | 4 | 58 |
| Marasmus | 1 | | 1 | | | 1 | | 2 | | 1 | | 1 | 1 | | | 8 |
| Phthisis | 1 | 2 | 2 | 4 | 1 | 4 | 3 | 3 | 2 | 4 | | 3 | 3 | 1 | 3 | 36 |
| Bronchitis | 1 | 1 | 2 | | 1 | 1 | | | | 1 | 1 | 8 | 2 | | 2 | 20 |
| Pneumonia | 2 | 1 | 1 | 2 | | 1 | | 1 | | 1 | 1 | 2 | | | 2 | 14 |
| Suicide | | | | | | 1 | | | | | | | 1 | | | 2 |
| Accidents | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | 1 | | | 7 |

DECEMBER.

| All causes, under 5 years.. | 6 | 9 | 1 | 5 | 1 | 18 | 10 | 8 | 1 | 13 | 4 | 17 | 19 | 6 | 8 | 126 |
|--------------------------------|---|---|---|---|---|----|----|---|---|----|---|----|----|---|---|-----|
| Small-pox..... | | | | | | | | | | | | | | | | |
| Measles..... | | | | | | | | | | 1 | | 3 | | | | 4 |
| Scarlet Fever..... | | | | | | | | | | | | | 1 | | | 1 |
| Diphtheria..... | | 3 | | | | 3 | 2 | | | | 1 | | 7 | 1 | 1 | 18 |
| Whooping Cough..... | | | | | | | | | | | | | | | | |
| Typhoid Fever..... | | | | 1 | | 3 | 1 | | 1 | 1 | | | | | | 7 |
| Malarial Fevers..... | | 1 | | | | 1 | | | | | | 1 | | | | 3 |
| Diarrhœal Diseases..... | 1 | | 1 | | | | | | | | | | | | | 2 |
| Cerebro-Spinal Meningitis..... | | | | | | | | | | | | | | 1 | | 1 |
| Other Zymotic Diseases..... | 1 | 2 | | | | 4 | 4 | 3 | | 4 | | 1 | 8 | 2 | 1 | 30 |
| Total Zymotic Diseases..... | 2 | 6 | 1 | 1 | | 11 | 7 | 3 | 1 | 6 | 1 | 5 | 16 | 4 | 2 | 66 |
| Marasmus..... | 1 | | | 2 | | 2 | 1 | | 1 | 1 | | 2 | 1 | 1 | | 12 |
| Phthisis..... | 2 | 2 | 1 | | | 4 | 1 | | 1 | 3 | | 4 | 3 | | | 22 |
| Bronchitis..... | | 1 | | | 1 | 1 | | | | 4 | 1 | 4 | 2 | | | 14 |
| Pneumonia..... | 1 | 4 | | 4 | | | 1 | 4 | 1 | 3 | 2 | 2 | 3 | 1 | | 27 |
| Suicide..... | | | | | | 1 | | 1 | | | | | | | | 2 |
| Accidents..... | | 1 | | 1 | | | | 2 | | 1 | | 3 | | | | 8 |

